

Serial No. 10/649,870
Reply to Final Office Action of June 8, 2005
Docket No.: H054165.0002US0

Amendments to the Claims:

Please cancel Claims 34, 35, 47, and 48.

Please amend Claims 29, 31, 36, 40, and 42 – 44 as indicated below in the Listing of Claims.

Please add new Claims 49 – 52.

The following listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1 – 28 (Cancelled)

29. (Currently Amended) An airborne element detection and evacuation system for a structure, comprising:

an airborne element sensor, capable of detecting the presence of a predetermined airborne element, the airborne element sensor having an output signal indicating the presence of the predetermined airborne element;

an airborne element evacuation system in communication with the airborne element sensor and capable of receiving the output signal, the airborne element evacuation system comprising a conduit system coupled to an interior of the structure and coupled to an exhaust apparatus; **and**

a first valve and a second valve within the conduit system, the first valve being interposed between the interior of the structure and the second valve, the second valve being interposed between the first valve and the exhaust apparatus; and

an alert system in communication with the airborne element evacuation system, the alert system comprising visual, audible, and haptic interface system alerts, wherein upon the output signal indicating the presence of the predetermined airborne element, the evacuation system actuates **the second valve causing the second valve to open to allow the exhaust apparatus causing** at least a portion of the airborne element to be removed from the structure via the conduit system, and the alert system actuates the visual, audible, and haptic interface system alerts.

30. (Previously Presented) The airborne element detection and evacuation system of Claim 29, wherein the alert system is portable.

Serial No. 10/649,870

Reply to Final Office Action of June 8, 2005

Docket No.: H054165.0002US0

31. (Currently Amended) The airborne element detection and evacuation system of Claim 29, wherein the alert system further comprises a power receptacle interface having a plurality of programmable outlets, at least one outlet being configured to change states upon the output signal indicating the presence of the predetermined airborne element.

32. (Previously Presented) The airborne element detection and evacuation system of Claim 31, wherein the power receptacle interface includes the visual and audible alerts.

33. (Previously Presented) The airborne element detection and evacuation system of Claim 31, wherein the power receptacle interface is portable.

34. (Cancelled)

35. (Cancelled)

36. (Currently Amended) The airborne element detection and evacuation system of Claim 29, wherein the airborne element evacuation system further comprises a booster apparatus within the conduit system, the booster apparatus being interposed between the interior of the structure and the exhaust apparatus, wherein upon the output signal indicating the presence of the predetermined airborne element, actuation of the exhaust apparatus causes the booster apparatus to activate assisting the exhaust apparatus in removing at least a portion of the airborne element from the structure via the conduit system.

37. (Previously Presented) The airborne element detection and evacuation system of Claim 29, further comprising a filter apparatus interposed between a discharge of the exhaust apparatus and an ambient atmosphere exit means, wherein prior to entering the atmosphere, the airborne element is filtered through the filter apparatus.

38. (Previously Presented) The airborne element detection and evacuation system of Claim 29, wherein the airborne element sensor is a smoke detector.

39. (Previously Presented) The airborne element detection and evacuation system of Claim 38, further comprising a sprinkler system in communication with the smoke detector, wherein upon detection of smoke, the sprinkler system is activated.

40. (Currently Amended) The airborne element detection and evacuation system of Claim 38, wherein the sprinkler system is ~~resettable~~ resetable.

41. (Previously Presented) The airborne element detection and evacuation system of Claim 29, wherein the airborne element sensor is capable of detecting temperature, smoke, and carbon monoxide.

42. (Currently Amended) An airborne element detection and evacuation system for a structure, comprising:

Serial No. 10/649,870

Reply to Final Office Action of June 8, 2005

Docket No.: H054165.0002US0

an airborne element sensor, capable of detecting the presence of a predetermined airborne element, the airborne element sensor having an output signal indicating the presence of the predetermined airborne element;

an airborne element evacuation system comprising a conduit system coupled to an interior of the structure and coupled to an exhaust apparatus; and

a power receptacle interface having at least one outlet that can be configured to change states, wherein upon the output signal indicating the presence of the predetermined airborne element, the evacuation system actuates the exhaust apparatus causing at least a portion of the airborne element to be removed from the structure via the conduit system, and changes the states of the at least one outlet.

43. (Currently Amended) An airborne element detection and evacuation system for a structure, comprising:

at least one airborne element sensor, capable of detecting the presence of predetermined airborne elements, the at least one airborne element sensor having an output signal indicating the presence of the predetermined airborne element; and

an airborne element evacuation system comprising:

a conduit system coupled to an interior of the structure and coupled to an exhaust apparatus; and

at least one first valve and at least one second valve within the conduit system, the first valve being interposed between the interior of the structure and the second valve, the second valve being interposed between the first valve and the exhaust apparatus, wherein upon the output signal indicating the presence of the predetermined airborne element, the evacuation system actuates the exhaust apparatus and the second valve causing the second valve to open and causing at least a portion of the airborne element to be removed from the structure via the conduit system.

44. (Currently Amended) The airborne element detection and evacuation system of Claim 43, further comprising:

a plurality of zones within the structure, each zone having an interior, an airborne element sensor, a first valve, and a second valve, the conduit system being coupled to the interior of each zone, wherein each zone's first valve is interposed between the zone's interior and the zone's second valve, each zone's second valve being interposed between the first valve and the exhaust apparatus; and

a programmable control system in communication with the airborne element sensors, the second valves, and the airborne element evacuation system, wherein

Serial No. 10/649,870

Reply to Final Office Action of June 8, 2005

Docket No.: H054165.0002US0

detection of a predetermined airborne element within one of the plurality of zones, causes the control system to actuate that zone's second valve causing that zone's second valve to open, whereby the first valve of that zone opens allowing at least a portion of the airborne element to be removed from that zone via the conduit system, and the control system causing the remaining zones' second valves to close sealing ~~of~~ off the remaining zones' interiors from the conduit system.

45. (Previously Presented) The airborne element detection and evacuation system of Claim 44, wherein the plurality of second valves, the plurality of airborne element sensors, the exhaust apparatus, and the control system communicate via an AS-I compliant communication bus.

46. (Currently Amended) An airborne element detection and evacuation system for a structure, comprising:

an airborne element sensor, capable of detecting the presence of a predetermined airborne element, the airborne element sensor having an output signal indicating the presence of the predetermined airborne element;

an airborne element evacuation system comprising:

a conduit system coupled to an interior of the structure and coupled to an exhaust apparatus; and

a booster apparatus within the conduit system, the booster apparatus being interposed between the interior of the structure and the exhaust apparatus, wherein upon the output signal indicating the presence of the predetermined airborne element, the evacuation system actuates the exhaust apparatus causing the booster apparatus to activate causing at least a portion of the airborne element to be removed from the structure via the conduit system.

47. (Cancelled)

48. (Cancelled)

49. (New) The airborne element detection and evacuation system of Claim 43, wherein actuation of the exhaust apparatus, and opening of the second valve causes a vacuum force within the conduit system causing the first valve to open.

50. (New) A method for evacuating airborne elements from a structure, comprising:

detecting, via an airborne element sensor, the presence of predetermined airborne elements within a structure;

sending a signal to an airborne element evacuation system upon detection of a predetermined airborne element, the airborne element evacuation system comprising a

Serial No. 10/649,870

Reply to Final Office Action of June 8, 2005

Docket No.: H054165.0002US0

conduit system coupled to an interior of the structure and coupled to an exhaust apparatus, a first valve and a second valve within the conduit system, the first valve being interposed between the interior of the structure and the second valve, the second valve being interposed between the first valve and the exhaust apparatus; and

actuating the exhaust apparatus and the second valve causing the second valve to open to allow at least a portion of the airborne element to be removed from the structure via the conduit system.

51. (New) The method for evacuating airborne elements from a structure of Claim 50, further comprising actuating visual, audible, and haptic interface system alerts, alerting as to the presence of the airborne elements within the structure.

52. (New) A method for evacuating airborne elements from a structure, comprising:

detecting, via an airborne element sensor, the presence of predetermined airborne elements within a structure;

sending a signal to an airborne element evacuation system upon detection of a predetermined airborne element, the airborne element evacuation system comprising a conduit system coupled to an interior of the structure and coupled to an exhaust apparatus, a booster apparatus within the conduit system, the booster apparatus being interposed between the interior of the structure and the exhaust apparatus; and

actuating the exhaust apparatus causing the booster apparatus to activate causing at least a portion of the airborne element to be removed from the structure via the conduit system.